REMARKS

Claims 1-16 are pending. Claims 9-14 have been withdrawn from consideration by the Examiner for being drawn to a non-elected invention. By this Amendment, Claims 5 and 8 are amended and Claims 15-16 added. Applicants respectfully submit no new matter is presented.

Allowable Subject Matter

Applicants respectfully acknowledge and appreciate the indication by the Examiner that Claims 4 and 7, although objected to for depending from a rejected base claim, i.e., Claim 1, would be in condition for allowance if rewritten in independent form and to include all of the features of the rejected base claim and any intervening claims.

Applicants further acknowledge and appreciate the indication by the Examiner that Claims 5 and 8, although rejected under 35 U.S.C. §112, second paragraph, would be allowable if amended to overcome the rejection and include all of the features of rejected base claim 1 and any intervening claims.

Claims 1-8 and 15-16 Recite Patentable Subject Matter

Claims 5 and 8 are rejected under 35 U.S.C. §112, second paragraph. Applicants respectfully submit the claims have been amended responsive to the rejection. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 4,270,360 to Nakane et al. (hereinafter "Nakane"). Applicants respectfully traverse the rejection.

Claim 1 recites a hydrogen storage tank including an outer cylinder and at least one cylindrical hydrogen storage module positioned within the outer cylinder. The at

least one cylindrical hydrogen storage module having an outer diameter smaller than an inner diameter of the outer cylinder wherein a hydrogen passage is formed between an inner peripheral surface of the outer cylinder and the at least one cylindrical hydrogen storage module. Each cylindrical hydrogen storage module having: a laminate that includes a plurality of adjacent hydrogen storage units filled with hydrogen absorption materials and a hydrogen absorption and desorption surface on at least a part of an outer peripheral surface of the laminate; at least one heating/cooling element positioned between adjacent ones of the hydrogen storage units; at least one main passage that passes through the laminate in a lamination direction of the hydrogen storage units parallel to a longitudinal axis of the outer cylinder, wherein heating fluid and cooling fluid pass through the at least one main passage; and sub passages that branch from the at least one main passage in a direction perpendicular to the longitudinal axis and extend over within each of the heating/cooling elements.

Applicants respectfully submit Nakane fails to teach or suggest each and every feature recited by Claim 1.

As noted above, Claim 1 recites the hydrogen storage tank includes at least one cylindrical hydrogen storage module positioned within the outer cylinder of the tank wherein a hydrogen passage is formed between an inner peripheral surface of the outer cylinder and the at least one hydrogen storage module. The Office Action asserts Nakane teaches at least hydrogen storage module 5-6 and 10-11 as being positioned within the outer cylinder of the of the hydrogen storage device. Applicants respectfully submit reference numbers 5-6 of Nakane actually identify heating/cooling members (5, 6) and not hydrogen storage modules. Moreover, spaces 10, 11, which are disposed

between the heating/cooling members 5, 6, are filled with a hydrogen storage alloy. The Office Action asserts a hydrogen passage is formed between an inner peripheral surface of the outer cylinder and the hydrogen storage module, i.e., the spaces (10, 11) filled with the hydrogen storage alloy. Applicants respectfully note Nakane specifically states the spaces 10, 11 between the sintered metal plates 1, 2 serve as passages for the hydrogen that is occluded or released by the hydrogen storage alloy disposed in the spaces 10, 11. Furthermore, Applicants respectfully submit Nakane does not teach or suggest a hydrogen passage being formed between an inner peripheral surface of the outer cylinder and the hydrogen storage alloy-filled spaces 10, 11. The Office Action asserts Figure 5 of Nakane illustrates a plurality of hydrogen feed/discharge passages to the modules. Applicants respectfully submit Figure 5 of Nakane actually discloses a plurality of the individual units illustrated in Figure 1 of Nakane disposed in side-by-side or parallel relationship relative to each other. See column 7, lines 36-44 of Nakane. Figure 5 does not teach, suggest, or illustrate a plurality of hydrogen feed/discharge passages to the modules.

Applicants respectfully note that Claim 1 also recites each cylindrical hydrogen storage module has a laminate including a plurality of adjacent hydrogen storage units filled with hydrogen absorption materials, the laminate having a hydrogen absorption and desorption surface on at least a part of an outer peripheral surface of the laminate. Applicants respectfully submit Nakane does not teach or suggest a laminate. In fact, a search of Nakane fails to uncover the word laminate anywhere therein. The Office Action asserts Nakane teaches such a feature and points to each hydrogen storage unit having a pair of hydrogen storage alloy filled spaces 10, 11 wherein the laminate has a

hydrogen absorption and desorption surface on at least a part of the outer peripheral surface of the laminate. The Office Action points to Figure 2 to support such an assertion. Applicants have been unable to locate any teaching or suggestion of at least a part of the outer peripheral surface of any feature of the Nakane hydrogen storage device having a hydrogen absorption and desorption material. Moreover, Applicants respectfully note the outer peripheral surface of the alloy located in the spaces 10, 11 is bounded by the heating/cooling members 5, 6, and that the members are not taught or suggested as having a hydrogen absorption and desorption material thereon.

Applicants further note that Claim 1 also recites the hydrogen storage tank includes sub passages that branch from at least one main passage in a direction perpendicular to the longitudinal axis of the outer cylinder and extend over within each of the heating/cooling elements. Applicants respectfully submit Nakane fails to teach or suggest such a feature as Nakane fails to teach or suggest sub passages branching from the main passages. The Office Action asserts Figure 5 of Nakane illustrates such a feature. However, Applicants have reviewed Nakane and note that Figure 5 of Nakane actually discloses a plurality of the individual units illustrated in Figure 1 of Nakane disposed in side-by-side or parallel relationship relative to each other. See column 7, lines 36-44 of Nakane. Furthermore, Figure 5 of Nakane fails to illustrate any passages branching from any main passages. Figure 5 of Nakane does show a hydrogen feed pipe 4 and outlet pipe 9 that appear to be parallel to the hydrogen flow passage (downward pointed arrows), but at no point are the pipes 4 and 9 depicted or described as branching from the hydrogen flow passage.

To qualify as prior art under 35 U.S.C. §102, a single reference must teach or suggest each and every feature of a rejected claim. As noted above, Nakane does not teach or suggest each and every feature of Claim 1. As such, Applicants respectfully submit Claim 1 is not anticipated by nor rendered obvious by the teachings of Nakane and should be deemed allowable.

Claims 2-8 and 15-16 depend from Claim 1. It is respectfully submitted that these dependent claims be deemed allowable for the reasons Claim 1 is allowable as well as for the additional subject matter recited therein.

Applicants respectfully request withdrawal of the rejection.

Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Nakane in view of JP 11-211267 to Maruhashi et al. (hereinafter "Maruhashi"). Applicants respectfully traverse the rejection.

Claim 2 depends from Claim 1 and therefore includes all of the features recited therein.

Nakane is discussed above.

Maruhashi is applied for teaching sub-passages having a plurality of guide members that circulate heating and cooling fluids. However, Applicants respectfully submit Maruhashi does not overcome the above-discussed deficiencies of Nakane.

To establish *prima facie* obviousness, each feature of a rejected claim must be taught or suggested by the applied art of record. See M.P.E.P. §2143.03. As explained above, Nakane and Maruhashi, either alone or in combination, fail to teach or suggest each and every feature recited by Claim 2. Therefore, Applicants respectfully submit that the Office Action has not established *prima facie* obviousness; Claim 2 is not

rendered obvious in view of Nakane and Maruhashi; and, as such, Claim 2 should be deemed allowable.

Applicants respectfully request withdrawal of the rejection.

Claims 3 and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nakane in view of Maruhashi as applied to Claim 2, and in view of U.S. Patent No. 6,099,811 to Stetson et al. (hereinafter "Stetson"). Applicants respectfully traverse the rejection.

Claims 3 and 6 depend from Claim 1, and therefore, include all of the features recited therein.

Nakane and Maruhashi are discussed above.

Stetson is applied for teaching heating fluid including hydrogen and oxygen, wherein the heating/cooling elements include a catalyst that facilitates a burning reaction of the hydrogen with the oxygen. However, Applicants respectfully submit Stetson does not overcome the above-discussed deficiencies of Nakane and/ Maruhashi.

To establish *prima facie* obviousness, each feature of a rejected claim must be taught or suggested by the applied art of record. See M.P.E.P. §2143.03. As explained above, Nakane, Maruhashi, and Stetson, either alone or in combination, fail to teach or suggest each and every feature recited by Claims 3 and 6. Therefore, Applicants respectfully submit that the Office Action has not established *prima facie* obviousness; Claims 3 and 6 are not rendered obvious in view of Nakane, Maruhashi; and Stetson, and, as such, Claims 3 and 6 should be deemed allowable.

Applicants respectfully request withdrawal of the rejection.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of the Claims 1-8 and 15-16, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107348-00097**.

Respectfully submitted,
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